Title (en)

CONTROL OF A SOLUTION PROCESS FOR POLYMERIZATION OF ETHYLENE

Title (de)

BEHERRSCHUNG DES LOESUNGSPOLYMERISATIONSVERFAHRENS FUER ETHYLEN

Title (fr)

CONTROLE D'UN PROCEDE DE POLYMERISATION EN SOLUTION DE L'ETHYLENE

Publication

EP 0606303 B1 19970108 (EN)

Application

EP 92920401 A 19920925

Priority

- CA 9200420 W 19920925
- GB 9120971 A 19911003

Abstract (en)

[origin: WO9307189A1] A solution process for the preparation of high molecular weight polymers of alpha-olefins selected from the group consisting of homopolymers of ethylene and copolymers of ethylene and C3-C12 higher alpha-olefins is disclosed. Ethylene and/or mixtures of ethylene and C3-C12 higher alpha-olefins are polymerized under non-isothermal conditions in a tubular reactor or in a system of reactors which operate under different conditions, in the presence of a catalytic amount of a titanium-containing coordination catalyst in an inert solvent at a temperature in excess of 105 DEG C. The improvement is characterized in that: (a) the catalyst is activated with a solution of a mixture of aluminum alkyl and alkoxy aluminum alkyl in inert solvent; and (b) the process is controlled by adjusting the ratio of aluminum alkyl to alkoxy aluminum alkyl in the mixture of (a). The aluminum alkyl is of the formula AlRnX3-n and the alkoxy aluminum alkyl is of the formula AlR'mOR''3-m, in which each of R, R' and R'' is alkyl or aryl of 1-20 carbon atoms, X is halogen, n is 2-3 and m is 0-3.

IPC 1-7

C08F 10/02; C08F 2/06; C08F 4/642

IPC 8 full level

C08F 2/04 (2006.01); **C08F 2/06** (2006.01); **C08F 4/60** (2006.01); **C08F 4/654** (2006.01); **C08F 4/685** (2006.01); **C08F 10/00** (2006.01); **C08F 10/02** (2006.01); C08F 110/02 (2006.01)

CPC (source: EP)

C08F 10/00 (2013.01); **C08F 10/02** (2013.01); C08F 110/02 (2013.01)

Cited by

EP1749807A1; US9562631B2; WO2007014593A1

Designated contracting state (EPC)

BE CH DE FR GB IT LI NL

DOCDB simple family (publication)

WO 9307189 A1 19930415; AU 2663492 A 19930503; BR 9206586 A 19951121; CA 2119738 A1 19930415; CA 2119738 C 20060718; CN 1033811 C 19970115; CN 1070917 A 19930414; DE 69216633 D1 19970220; DE 69216633 T2 19970703; EP 0606303 A1 19940720; EP 0606303 B1 19970108; GB 9120971 D0 19911113; IN 178244 B 19970315; JP 3174333 B2 20010611; JP H06511036 A 19941208; KR 100227774 B1 19991101; MX 9205649 A 19930401; MY 110520 A 19980731; RU 2128190 C1 19990327; RU 94041206 A 19960510; TR 28914 A 19970721; TW 207546 B 19930611

DOCDB simple family (application)

CA 9200420 W 19920925; AU 2663492 A 19920925; BR 9206586 A 19920925; CA 2119738 A 19920925; CN 92112050 A 19921003; DE 69216633 T 19920925; EP 92920401 A 19920925; GB 9120971 A 19911003; IN 706CA1992 A 19920929; JP 50649193 A 19920925; KR 19940701077 A 19940402; MX 9205649 A 19921002; MY PI19921788 A 19921002; RU 94041206 A 19920925; TR 92692 A 19921001; TW 81107903 A 19921003